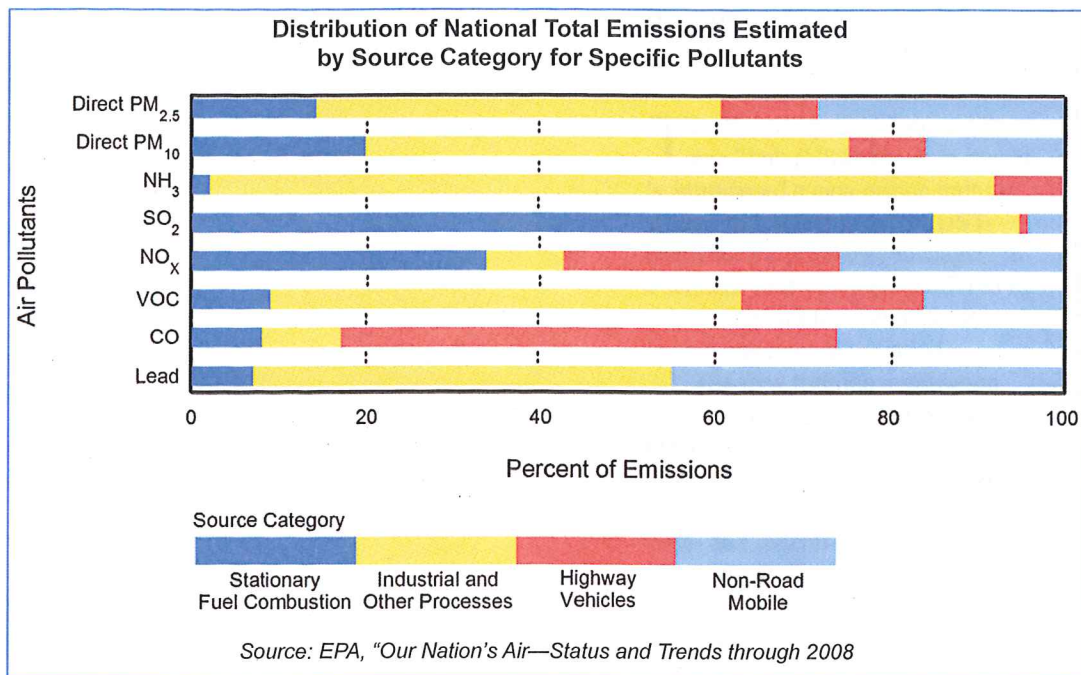


# Tier 3 vehicle standards

EPA proposes new rules for cleaner cars and fuels

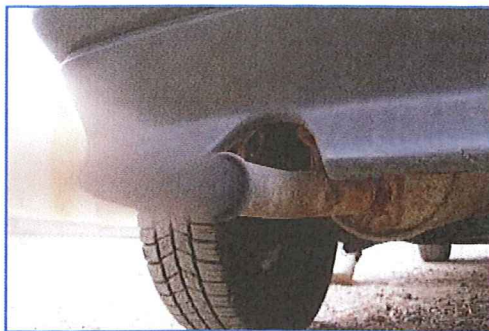


By Roberta Burnes  
Division for Air Quality

Every single day, more than **132 million miles** are traveled on Kentucky roads. How do we protect air quality while keeping the wheels of our economy moving?

The past four decades have seen gradual but significant improvements in fuel economy, emissions control systems, and even the reformulation of the fuels we use. Each of these incremental changes has helped improve air quality and protect human health by reducing harmful emissions.

"When it comes to reducing air pollution from passenger vehicles, you can approach it in two ways," says Division for Air Quality Director John Lyons. "One is to improve the vehicle by building better engines and tighter emissions control systems. The other way is to clean up



the fuel itself, by removing harmful pollutants like lead and sulfur, before they're burned."

Indeed, the U.S. Environmental Protection Agency (EPA) has used both approaches over the years with great success. Vehicles built today are far less polluting than vehicles built in the 1970s, in part due to EPA rules aimed at cleaning up emissions.

Case in point: Lead. If you're over 50, you probably remember putting leaded fuel into your gas tank. For decades, lead was blended with gasoline, primarily to boost octane levels. But burning leaded gasoline had unintended consequences—airborne lead, a potent neurotoxin—had become a serious health concern, especially for the nation's children. That's why in 1973, the EPA issued the

first lead reduction standards for gasoline. By the mid-1990s, leaded gasoline

was a thing of the past.

"The elimination of lead from gas is one of the great environmental achievements of all time," said former EPA Administrator Carol Browner. "Thousands of tons of lead have been removed from the air, and blood levels of lead in our children are down 70 percent."

## Tier 3 Motor Vehicle Emission and Fuel Standards

EPA's latest effort to control motor vehicle emissions addresses *both* tailpipe and fuel standards, considering the vehicle and its fuel together as an integrated system. Starting in 2017, the Tier 3 rules would

set new passenger vehicle emissions standards while lowering the sulfur content of gasoline. A draft proposal of the new rules was released in March.

The proposed gasoline sulfur standard would make emission control systems more effective for both existing and new vehicles, and would allow more stringent vehicle emissions standards. Removing sulfur allows the vehicle's catalyst to work more efficiently. Lower sulfur gasoline also enables the development of lower-cost technologies to improve fuel economy and reduce greenhouse gas emissions, which in turn reduces gasoline consumption and saves consumers money.

Why are new standards being proposed? "Protecting public health is goal No. 1," says Lyons. "Passenger vehicles are major contributors to air pollution, especially in urban areas." Indeed, more than 3.5 million passenger vehicles were registered in Kentucky in 2010, according to the U.S. Department of Transportation. "From an air quality standpoint, making cleaner vehicles and cleaner fuel just makes sense," says Lyons.

Continued to Page 15

# Tier 3 vehicle standards

Continued from Page 1

According to the EPA, more than 158 million Americans are currently experiencing unhealthy levels of air pollution that are linked to adverse health impacts such as hospital admissions, emergency room visits and premature death. The Tier 3 standards would have immediate health and air quality benefits by reducing the impacts of motor vehicles on air quality and public health.

Motor vehicles are the second-largest emitters of nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOCs), the main ingredients in smog and ground-level ozone (see graph on Page 1). They're also the nation's leading source of carbon monoxide pollution.

The Tier 3 vehicle standards propose:

- 80 percent reduction in VOC and NO<sub>x</sub> tailpipe emissions.
- 70 percent reduction in particulate matter tailpipe emissions.
- Reduced fuel vapor emissions.

The Tier 3 fuel standards would require refineries to lower the average sulfur standard in produced fuels from 30 to 10 parts per million (ppm) beginning in 2017. This is similar to sulfur standards already being achieved in California, Europe, Japan, South Korea and several other countries.

Since California has been using lower vehicle emission standards for some time, the auto industry has had time to develop the technology needed to comply with Tier 3. In fact, auto makers have had to deal with two different vehicle standards up to this point—one for California and one for the rest of the nation. "Vehicle manufacturers are extremely supportive of Tier 3 because it sets uniform emissions standards for all vehicles nationwide," says Lyons.

EPA estimates the new standards would add only about 1 cent per gallon to the cost of gasoline at the pump. The cost of a new vehicle would increase by an estimated \$130 by 2025.

The proposed Tier 3 rules were published in the Federal Register in May, after which EPA began accepting public comments. EPA will review and address all public comments before finalizing the rules.

For more information visit <http://www.epa.gov/otaq/tier3.htm>